

Open & Operating

The Federal Reserve Responds to September 11





Table of Contents

- 2** Introduction
- 4** Pre-viewing Procedures
- 8** Video Viewing Procedures
- 10** Post-viewing Procedures
- 13** Visuals
- 18** Student Handouts
- 23** Video Transcript
- 29** Glossary of Terms and References

Introduction



One class period required

What is the purpose of a central bank? How did an extraordinary event challenge the infrastructure of the financial system? What role does the central bank play in responding to a crisis situation?

Open and Operating: The Federal Reserve Responds to September 11 is a video-based lesson designed to answer these important questions and provide teachers of social studies and economics a flexible format; in which to introduce the Federal Reserve System and to provide a more comprehensive treatment of the subject.

The events of September 11, 2001, provide the context for this lesson, documenting how the Federal Reserve acted decisively to calm the financial markets, keep funds moving, and stabilize the economy. Students will participate in a pre-viewing discussion, actively view the Open and Operating video, and complete a culminating assignment.

The Open and Operating lesson is organized into three major sections that include an introduction to the themes of the video, viewing of the video itself, and an assignment designed to review the purposes and functions of the central bank and to synthesize information presented in the video program. The lesson utilizes visual representations and student generated posters as an active viewing strategy and as the basis for the instructional process.

Concepts

- Central Bank
- Financial System
- Liquidity
- Monetary Policy Tools
- Payments System

Student Objectives

1. Identify the steps taken by the Federal Reserve System to stabilize financial markets following the events of September 11.
2. Define liquidity and its significance in providing a stable economic environment, in which individuals and businesses conduct daily activities.
3. Create a poster depicting the actions of the Federal Reserve in response to the events of September 11.
4. Write a summary outlining the benefits of a well-functioning central bank.

Materials

- Open and Operating video
- VCR and remote control
- Handout 1 and 2
- Visual 1, 2, and 3
- For demonstration purposes only: \$1 bill, 1 debit or credit card, and 1 personal or payroll check

Introduction

The video is 16:21 minutes in length and is organized into six segments that include:



1. Introduction	3:38 minutes
2. Payments System	5:00 minutes
3. Banking Supervision and Regulation	1:05 minutes
4. Monetary Policy Tools	5:09 minutes
5. Federal Reserve Bank of New York specifics	1:44 minutes
6. Conclusion	1:35 minutes

The introductory segment provides a historical context for the U.S. central bank and establishes the challenges faced by the financial system as a result of the events of September 11. This segment is suitable for a broad audience, conveying the strength of the Federal Reserve and how important liquidity is to the stability of the economy and in maintaining public confidence.

Sections 2, 3, and 4 in the video define the specific Federal Reserve functions and how each area responded to the attacks on September 11. Section 5 describes the efforts of the Federal Reserve Bank of New York, located only two blocks from the World Trade Center, to continue operations during this time.

The concluding segment summarizes the results of the Federal Reserve's actions and how a well-functioning central bank acts to stabilize financial markets and the economy under extraordinary circumstances.

Voluntary National Content Standards in Economics

Open and Operating: The Federal Reserve Responds to September 11 reviews and reinforces the following content standards:

Content Standard 11:

Students will explore the importance of money and how the Federal Reserve facilitates the flow of money throughout the economy.

Content Standard 12:

Students will learn about interest rates, including how and why the Federal Reserve may change interest rates in times of economic uncertainty.

Content Standard 13:

Students will understand how the Federal Reserve's monetary policy influences the overall levels of employment, output, and prices.

Pre-viewing Procedures

1. Holding up a one dollar bill, ask the following: *How is this piece of paper significant in your world?* (Accept a variety of answers that may include: buy or purchase things, obtain goods and services, or being paid for goods or services, etc.)
2. Holding up the debit or credit card, ask the following: *How does this debit/credit card differ from the \$1 bill?* (Accept responses that generally convey a function similar to that of cash in that one can purchase goods and services, borrow funds, etc. Do not spend a great deal of time differentiating the characteristics of either payment type - the main point is the ability to facilitate transactions.)
3. Holding up a personal or payroll check, ask the following: *How about this check? What does it allow me to accomplish?* (Again, accept various responses that convey similar characteristics to cash.)
- 4.0 On the board or overhead projector, write "Forms of Money" and list "cash," "electronic transfers (plastic)," and "checks," ask the following: *Have we forgotten any other forms of money?*
- 4.1 On a piece of paper, I want you to write down your last five money transactions and please follow the format in this example. (Write the following on the board: Transaction, Form of Money, Flow of Money In or Out, or display Visual 1. Utilizing Visual 1, discuss the example of having bought a cup of coffee with your debit card.)
- 4.2 What do you suppose would be an example of a flow of money coming in (allowance, payroll)?
- 4.3 Now, go ahead and record your last five transactions involving some form of money.

Pre-viewing Procedures

5.0 Allow approximately five minutes for this activity and resume the discussion by asking the following:

5.1 Let's have several examples. (Record a number of examples on the board in the same format.)

5.2 This is interesting, we have a variety of transactions, forms of money, and flows going in both directions. (If you don't have any in-flow examples, take a moment to give an example.)

5.3 Looking at our data, what groups are primarily involved in the transactions (individuals, business, and the government)?

5.4 Any banks involved? (Yes, for checks, debit cards, and bank-issued credit cards.)

5.5 On the same paper you listed your transactions, take a moment to write a quick response to the following questions:

- Why is the coffee shop comfortable accepting a debit card?
- How is it that I can go out the door in the morning with absolutely no cash in my wallet?

6.0 Allow a couple of minutes for students to respond and then ask the following:

6.1 Who can give me an example of why this system works? (We are looking for something about trust or confidence in the system.)

6.2 I am curious about something in this room (pause for effect). How much cash do you think exists in this room at this moment? On the back of a piece of paper, write down an estimate of the dollar amount of cash you believe exists in the room right now. (Give the group 60 seconds to make their estimate.)

6.3 Well, before we reveal your estimates, let's just find out how much cash we actually have on hand. If you would, please count up the amount of cash in your pocket, purse, backpack, etc. Then, calculate the total amount of cash for your row. (Assuming students are seated in rows, if not, have them report by a grouping of your choice.)

6.4 Have one individual from each row come up to the board and record the total amount of cash on hand for your row (or whatever grouping you decided on).

Pre-viewing Procedures

- 6.5 If we add all of the rows together, what is the total amount of cash on hand in this room at this moment? (Record the total on the board and circle that number.)
- 6.6 Now let's take a look at your estimates of the total amount of cash on hand. Did anyone come close? (Respond to the amounts and recognize the brilliance of anyone who was close.)
- 6.7 We, each as individuals, have a certain amount of cash at our disposal at the moment and as a group we also have a specific amount. One way to characterize the cash we have access to is the term liquidity (write the term liquidity on the board).
- 6.8 We can define liquidity as the availability of money that each of us has. In our example we looked at cash and we also know from our discussion that money also takes the form of checks and electronic transfers.
- 6.9 Now let me ask you something, what form of money would you prefer to hold if you were afraid there might be a problem accessing money such as an empty ATM or a business not accepting checks, credit cards, or borrowing money on your credit card? (Cash.)
- 6.10 How much cash would you need? (Responses will vary and probably will be related to how long the situation lasts.)
- 6.11 Let's say you thought there might be a problem for a week, what would be your primary objective? (Get my hands on as much of my cash as possible.)
- 6.12 How would you accomplish the task of securing cash? (Go to the ATM or bank.)
- 6.13 What would happen if everyone had the same idea? (Mad rush to an ATM or bank, long lines.)
- 6.14 How would you live if you and your family could not access money or credit (panic, chaos)?
- 6.15 Can anyone think of an example of an event that might cause this type of disruption (natural disaster, war)?
- 6.16 Today you are going to take a look at a video that examines just exactly this type of disaster and it happened right here in the United States a few years ago. Does anyone have any idea of what that event might be? (Students may come up with the September 11 event.)
- 6.17 The event I am referring to occurred on September 11, 2001. Who can tell me what happened? Do you remember where you or your family were at the time? How old were you? (Allow students a few minutes to discuss their memories.)

Pre-viewing Procedures

6.18 Today we have been discussing the significance of money in our daily lives. The video you are about to watch details how an important institution called the Federal Reserve responded to the events of September 11.

6.19 I want to give you a 60 second overview of the Federal Reserve and then we will watch the video.

7.0 Prior to viewing the video, you will briefly outline the purposes and functions of the Federal Reserve utilizing the advanced organizer provided as Visual 2. This approach provides students with high-level “snapshot” of the Fed and a context for interpreting the measures undertaken to stabilize the economy. You will find a completed version of Visual 2 on page 12. Display Visual 2 and state the following:

7.1 This graphic organizer gives you a brief overview of the Federal Reserve. One particularly important term you will hear throughout the video refers to the availability of cash. What is that term? (Liquidity.)

Viewing the Video

This section provides numerous pause points that allow for short discussions, the opportunity for students to complete Handout 1, and to encourage active interest while viewing the video. You can follow along in the Video Transcript (page 19) for the pause points. Please be sure to keep the lights on as well.

8. Distribute a copy of Handout 1 to each student and instruct them to answer the questions as they watch the video. State that by the conclusion of the video, the benefit of a well-functioning central bank should be clear. Set the VCR counter to zero and push play.
9. Pause at 1:28. Allow students a moment to record their response to question 1 and then ask students to speculate on what is happening in the frame. (This represents a bank panic.) Resume video.
10. Pause at 3:04. Ask why people need faith in their financial institutions during times of crisis. (To minimize the risk of a panic and all the associated problems.) Resume video.
11. Pause at 5:21. Why is it that the public wants to get their hands on as much money as possible during a crisis? (They are afraid that if they wait, there won't be any money left in the bank.) Resume video.
12. Pause at 7:45. Define the term "float" and allow a few moments to answer question 7a and 7b on Student Handout 1. Resume video.

Viewing the Video

13. Pause at 11:02. Allow students a moment to consider the purpose of the Discount Window. (The Fed makes loans on an overnight basis to banks.) Ask students why the Fed loaned so much more on September 12. (Banks needed to meet the increased demand for funds due to the crisis. This was a cumulative problem that grew every day as the float grew and funds were not being cleared.) Ask students what the technical term is for the availability of funds? (Liquidity.) Resume video.
14. Pause at 12:54. Allow students a moment to record the amount of injected funds. Ask students what those dollar amounts represent? (Liquidity-meeting the need for cash.) Also discuss with students that during open market operations the Fed often buys and sells securities. Resume video.
15. Allow students a few moments to finish up the worksheet and discuss the following:
 - So what are your thoughts on the video? (Answers will vary.)
 - What strikes you as the most important thing the Federal Reserve did during the 9-11 crisis?
 - Do you remember any worry about your own access to money?
 - What do we call the availability of money? (Liquidity.)
 - What do you think are the main benefits of a well-functioning central bank?
 - To complete today's discussions, you will utilize your information from Handout 1 to develop a summary statement about the Federal Reserve's actions following September 11.

Post-viewing

To help students organize their thoughts regarding the Open and Operating video, they will construct visual representations utilizing the information recorded during the viewing section of the lesson. You will demonstrate how the use of a graphic organizer not only displays information, but also is useful in summarizing that information. The example provided here pertains to the star of the Harry Potter movies, Daniel Radcliffe.

16. Display Visual 3, covering up the summary statement at the bottom. An alternative approach would be to generate the graphic organizer, talking through the main points such as “we know he is a movie star [write the phrase “movie star” and circle it] and we know he plays the character of Harry Potter [write “Harry Potter,” circle it, and draw a line connecting the two circles], the first movie was Prisoner of Azkaban, [write “Prisoner of Azkaban,” circle it, and draw a line connecting...well you get the picture].
17. Work through the summary with your class. Ask them if given the facts in the organizer, you can state that Daniel currently lives in London with his family. This is an opportunity to point out that more facts are needed to back up the story.
18. Pair students up and announce that they will create visual representations of the Open and Operating video. They may use a graphic organizer approach as demonstrated in the Daniel Radcliffe example, or create a storyboard, captioned drawing, pictograph or comic book design. See the scoring rubric on page 12 for specifications. The purpose of the poster is to visually summarize the content of the video.
19. Utilize the poster scoring rubric on page 12 to assess student summaries. A second approach to evaluating student understanding will utilize the multiple choice questions created by each pair of students.

Post-viewing

20. Distribute Handout 2, review the instructions, and set a due date.
21. Allow students ample time to complete the assignment. Provide poster paper for students to transfer their visual representations with the accompanying summary statement appearing below.
22. Display the posters and discuss as a group.
23. Conduct a quick vote to determine the People's Choice Award for the best poster.
24. Assessment. Utilize the multiple choice questions created by each pair of students to assess student knowledge regarding the Federal Reserve's response to the events of September 11.

Open and Operating Poster Assessment.

Characteristics	4	3	2	1
Presentation <i>How well does the poster communicate the actions taken by the Fed following September 11?</i>	<ul style="list-style-type: none"> The format is carefully and strategically laid out. The reader is easily able to understand and follow the sequence of events and their relationship to each other. Powerful and substantial: no one would doubt the significance of the Fed actions. 	<ul style="list-style-type: none"> The format is organized and sequential. The reader is able to understand the purpose of the Fed actions. Clearly communicates the result of the actions taken by the Fed following September 11. 	<ul style="list-style-type: none"> A format was utilized. The reader is able to appreciate the actions of the Fed, but the loose organization makes the results unclear. Communicates the results of the actions taken by the Fed, but lacks depth. 	<ul style="list-style-type: none"> Format is unclear. The reader is unable to follow the logic or understand the actions of the Fed. Results of the Fed actions are not communicated or are unclear.
Content Connection <i>How well does the poster utilize facts and events depicted in the Open and Operating Video?</i>	<ul style="list-style-type: none"> Utilizes details from the video and facts from the worksheet in a significant and meaningful way. 	<ul style="list-style-type: none"> Provides an overview of the video and some facts from the worksheet. 	<ul style="list-style-type: none"> Provides a partial glimpse into the video and one or two facts from the worksheet. 	<ul style="list-style-type: none"> No depiction of events from the video or facts from the worksheet.
Creativity <i>To what degree does the poster communicate information in a skillful and imaginative way?</i>	<ul style="list-style-type: none"> Demonstrates an imaginative use of drawings, photos, color, or format to skillfully communicate information from the Open and Operating video. 	<ul style="list-style-type: none"> Uses drawings, photos, color, or format to communicate information from the Open and Operating video. 	<ul style="list-style-type: none"> Makes use of visual representations to communicate information from the Open and Operating video. 	<ul style="list-style-type: none"> Does not take advantage of the use of visual representations to communicate information contained in the Open and Operating video.



Visuals

Visual 1:

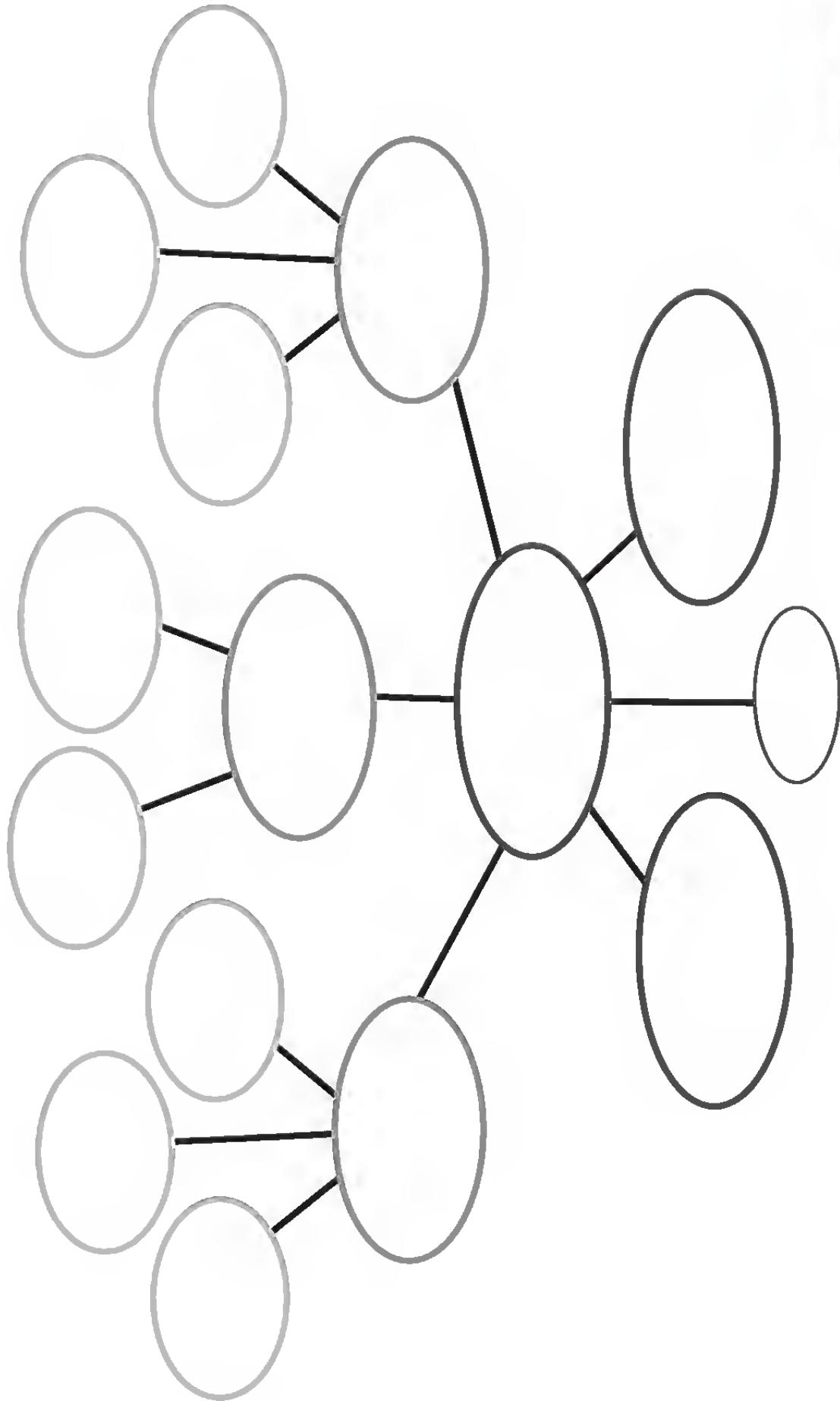
Example - I bought a cup of coffee this morning and I would record it this way.

Transaction	Form of Money	Flow of Money
1. Bought Coffee	Debit Card	Out
2.		
3.		
4.		
5.		

NOTE: A credit card generates a loan from your bank and not money from your bank account.

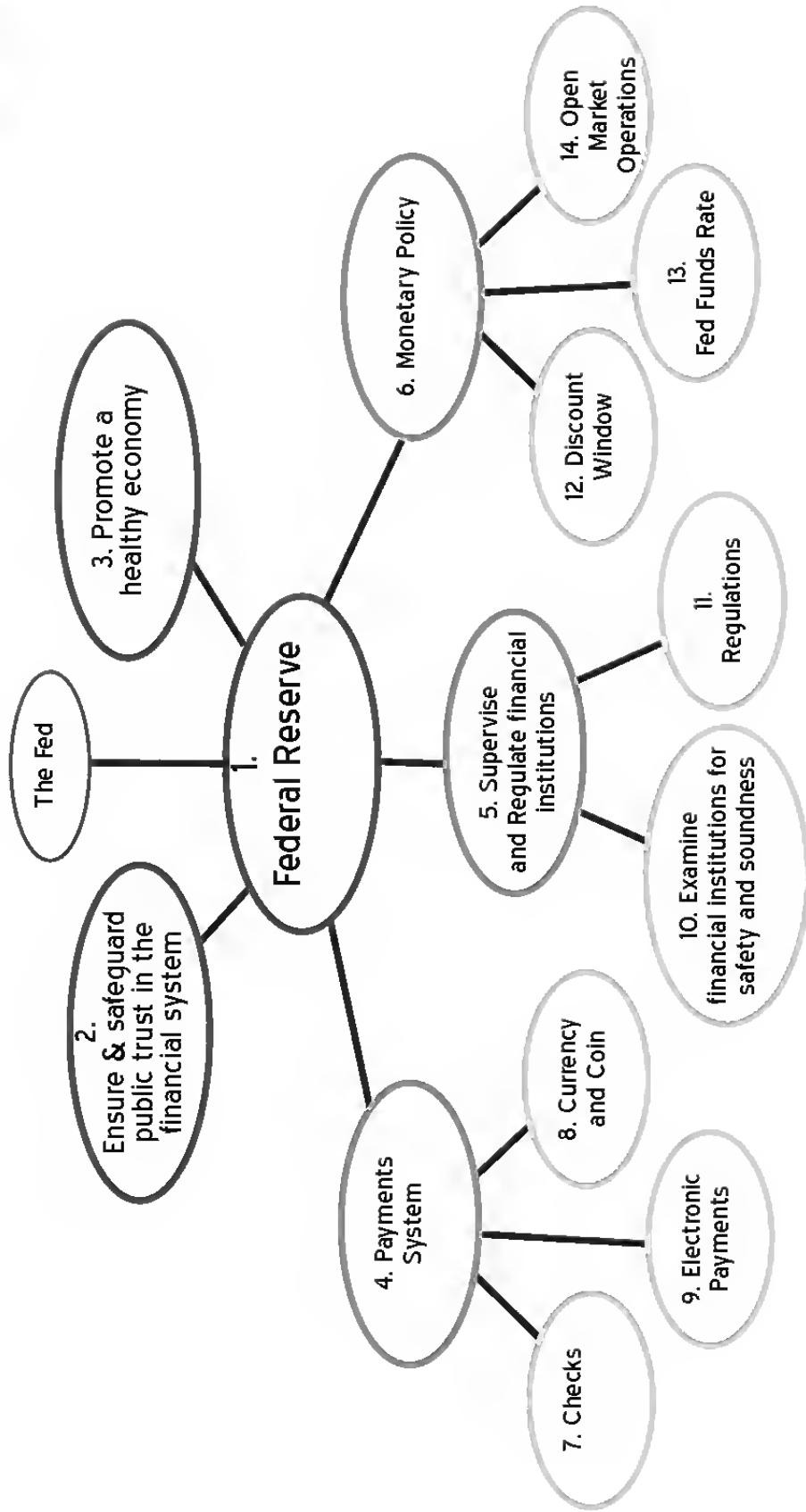
Visual 2: Facts about the Federal Reserve

Before

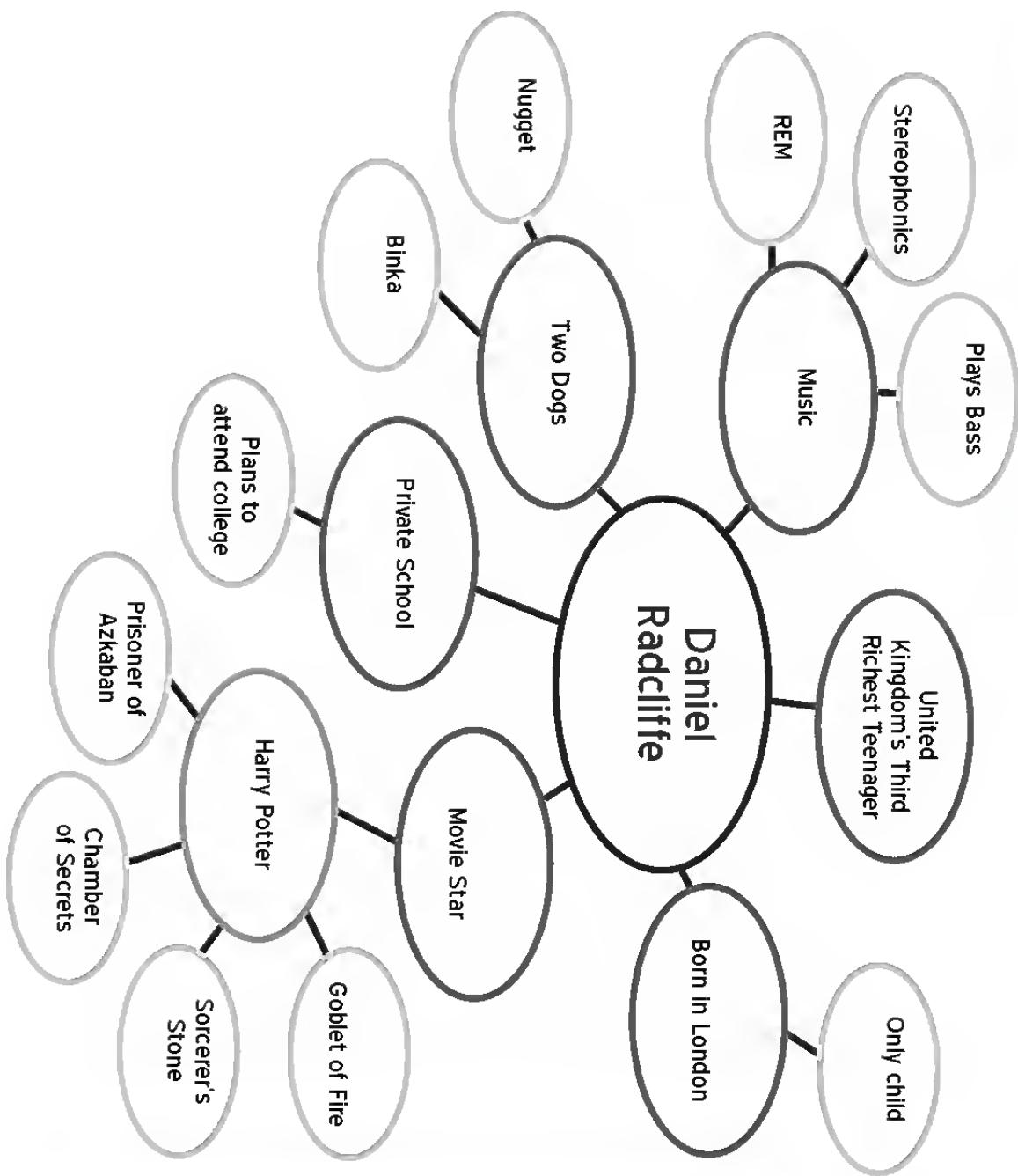


Visual 2: Facts about the Federal Reserve

After



Visual 3: Facts about Daniel Radcliffe



Sample Statement

“Daniel Radcliffe is the seventeen year old star of the Harry Potter series. Daniel is a fan of the Stereophonics and actually plays the bass guitar. He graduated in 2005 and plans to attend college. Given the fact that he is the United Kingdom's third richest teenager, college is undoubtedly one of many options. He currently lives in London with his family and two dogs.”



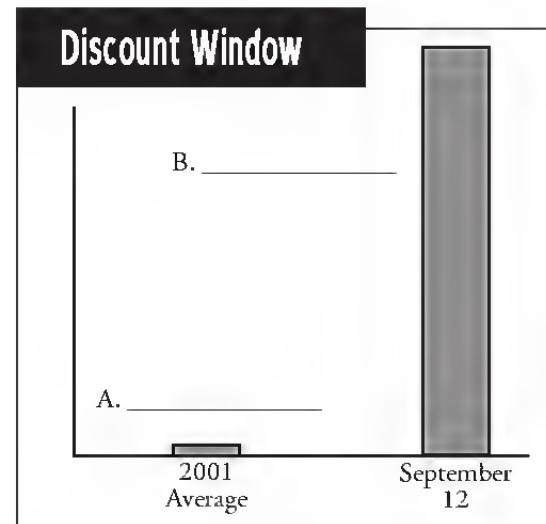
Student Handouts



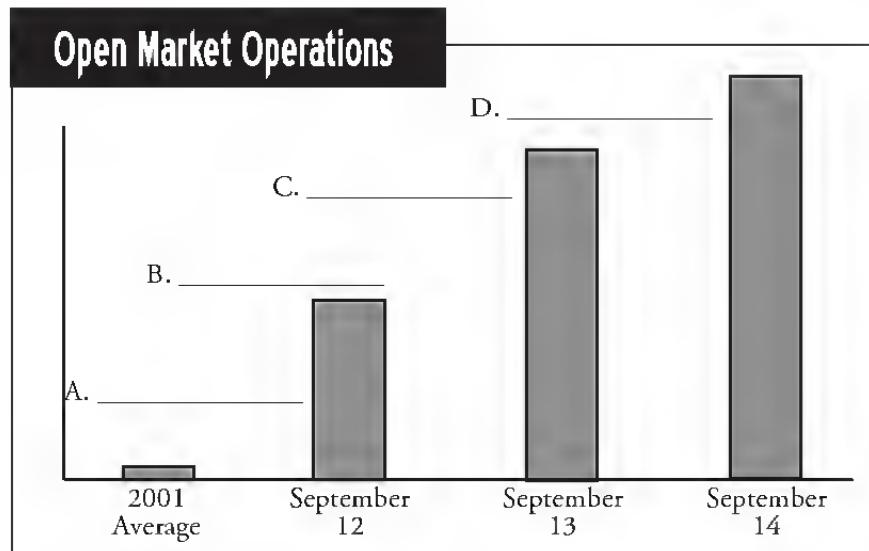
Answer the following questions while watching the video.

1. In what year was the Fed created?
2. The Fed was created for the purpose of _____.
3. Roger Ferguson states “obviously, significant loss of life in New York and Washington was high on everyone’s mind, but with respect to the Federal Reserve, the main issue had to do with the financial system.” Write your prediction of what might have happened to the financial system as a result of the attacks.
4. Why do people need faith in their financial institutions?
5. Liquidity is defined as the _____.
6. What was the challenge associated with ATMs?
- 7a. How much “float” did the Fed extend?
- 7b. How many times the average did this represent?

8. Discount Window [lends] money to banks typically overnight to help them maintain smooth operations.



9. Open Market Operations.



10. What action taken by the Fed calmed the markets?

11. What is the benefit of a well-functioning central bank?

12. Explain the significance of the video's title, *Open and Operating*.

13. How does a well-functioning central bank benefit you?



Directions: You will need a partner for this activity.

1. Using the Daniel Radcliffe example and your completed Handout 1, organize your thoughts and write a summary statement of the information presented in the *Open and Operating: The Federal Reserve Responds to September 11*. Use the space provided on the reverse side of this handout.
2. Create a poster (3'x3' sheet of poster paper) depicting the Federal Reserve's response to the events of September 11. You may use a graphic organizer approach as demonstrated in the Daniel Radcliffe example, or create a storyboard, captioned drawing, pictograph or comic book design. Be sure to make use of your creative talents, as you and your partner will display your efforts.
3. In the space provided below, please write two multiple choice questions, complete with answers, based on what you and your partner learned from the video.

Multiple Choice Question #1:

A. _____ C. _____
B. _____ D. _____

Multiple Choice Question #2:

A. _____ C. _____
B. _____ D. _____

Student Handout 2



The
Fed's response to the
events of September 11

Summary Statement:



Video Transcript

Video Transcript

Narrator: Every day...around the world... millions of financial transactions take place. In fact, during this short program, billions of dollars in electronic transfers... checks... and cash will move from one person, business, or financial institution to another. Fortunately, this transfer of money generally flows smoothly and, except by those directly involved, goes unnoticed. However, on September 11, 2001, the unexpected and the unimaginable happened.

One consequence of this event was the damage to a complex web of financial connections. During this time of financial vulnerability, the Federal Reserve System acted decisively and quickly to help stabilize our nation's economy.

Pause Here



Narrator: The Federal Reserve System, or the Fed, was created by Congress in 1913. Its purpose was to serve as the central bank of the United States. And, its primary mission at that time was to ensure and safeguard against bank panics. Over the years, the Fed's responsibilities have evolved. They now include monitoring our nation's payments system of electronic money transfers, checks, and cash; regulating banks for safety and soundness; and implementing monetary policy to promote a healthy economy and price stability. These roles of the Fed were put to the test on the days following September 11.

Narrator: On the morning of the eleventh, while Fed Chairman Alan Greenspan was on a return flight after meetings in

Switzerland, Vice Chairman Roger Ferguson coordinated the Fed's response from Washington, D.C.

Vice Chair Ferguson: "On the morning of September 11, 2001, I was sitting at my desk starting another business day. I got a phone call shortly before nine o'clock indicating that one of the towers at the World Trade Center was on fire. I turned on the TV to gather as much news as I possibly could and saw with horror and shock the second plane go into the second tower.

I then had a chance to look out of a window and saw smoke coming from the direction of the Pentagon. It was clear at that time that there was a major problem underway and that it looked as though there would be a number of issues and challenges that the U.S. would be confronting. Obviously, significant loss of life in New York and Washington was high on everyone's mind, but with respect to the Federal Reserve, the main issue had to do with the financial system."



Narrator: In times of crisis, like 9-11, people need faith in their nation's financial system. One way to strengthen this faith is to provide liquidity, which simply refers to the availability of money. And, to show that it was ready to offer the monetary assurance people and financial institutions needed, the Fed issued a short, yet important, statement: "The Federal Reserve System is open and operating. The discount window is available to meet liquidity needs."

Video Transcript

In the days that followed, the Fed helped to maintain calm in the financial markets through its three main functions: the payments system, banking supervision and regulation, and monetary policy.

Narrator: On Tuesday, September 11, the Federal Reserve monitored an intricate structure of financial connections called the payments system. Basically, the payments system refers to the Fed's roles in transferring money, or payments, from one bank to another. This is done either as electronic money transfers, checks, or cash.

Preventing failures in the payments system was an immediate concern of the Fed, since a blockage in any area could cause a gridlock throughout the entire network. A gridlock that had the potential to affect the financial markets and the economy.

A critical component of the payments system is Fedwire. This is a large-dollar electronic service that banks use to transfer payments to one another and to settle customer transactions. On an average day in 2001, Fedwire originated electronic transfers of about 1.6 trillion dollars. And, on Tuesday morning – September 11 – with the exceptions of a few disruptions in New York, Fedwire was running smoothly throughout the country. Knowing that Fedwire was operating as it should, the Fed next turned its attention to the money supply.

John Moore: "Well once we knew that Fedwire was up and running, our attention immediately turned to the cash area. And the reason for that is that it's very normal in a crisis situation or a natural disaster for the general public to want to go out and get their hands on as much cash as possible, and so we wanted to make sure that we were in a situation where plenty of cash was available to the banks and they in turn could make it available to their customers in order to avoid any kind of a panic situation."



Narrator: In Manhattan, all bridges and tunnels were closed, and the Fed was concerned that automated teller machines might run out of cash. To meet this potential shortage, the Federal Reserve Bank of New York immediately made special arrangements with New York City Police and New Jersey State Troopers. The purpose: to deliver more than 425 million dollars to local banks.

John Moore: "Well the first thing that we did was we told our customers don't worry about the usual schedule for ordering cash. Normally we would ask our banks to order by noon today in order for a delivery to arrive to them tomorrow. But we told them to forget about that in this situation because, after all, there was nothing normal about that particular day."

Video Transcript

Narrator: However, Fedwire and cash weren't the only concerns. The Fed also wanted to do whatever it could to process checks in a timely fashion. On a typical day, the Fed processes one-third of the total checks written in the U.S. This means that in 2001 approximately 55 million checks a day were delivered by ground and air transportation to the Fed's various processing sites. However, when air traffic was shut down, the Fed immediately began working on alternative methods of ground transportation.

Rich Oliver: "Float is the amount of money that's been credited to the accounts of depositing banks that has not yet been debited to the accounts of check writers across the country. In the days following 9-11 in order to maintain confidence in the check collection system, we continued to credit depositing banks according to normal schedules. We did this knowing full well that for inter-territory items that required air transportation we would not be able to collect those checks on time. In fact, on the twelfth of September we incurred somewhere around 23 billion dollars worth of float, which is about 30 times our historical daily average. This 23 billion dollars represents the liquidity that we provided for the payments system."

Pause Here



Narrator: Fedwire, cash, and check clearing...during the crisis the Fed carefully monitored and adapted these three payment methods to help stabilize the economy and maintain liquidity. But the Fed still had more

to do. Another primary function of the Fed is to act as a banking supervisor and regulator, overseeing the safety and soundness of the U.S. banking industry.

Richard Spillenkothen: "Our initial reaction to the events of September 11 was really to open up an ongoing, continuous dialogue with the other regulatory authorities, the office of the comptroller of the currency, the FDIC, the SEC, and the Office of Thrift Supervision. Our objective was to understand the impact of these events on the financial system, both from an operating risk standpoint and a liquidity and financial standpoint. Within two or three days into the extraordinary events, we began to see the potential for imbalances in bank balance sheets, due to inflows of deposits or to extraordinary credit demand, or other transactions that did not clear as initially expected.

As we saw the potential for this occurring, the regulatory authorities issued a statement to the banking industry, to the financial industry really, indicating that they should work with their customers, and as they saw these imbalances build up on their balance sheets, to communicate effectively with their regulatory authorities, so the authorities could understand the impact of events of 9-11 on the financial system and help us understand that and work with the organizations we supervise, as they work through this very difficult and extraordinary period."

Video Transcript

Narrator: In the days after 9-11, the Fed used its monetary policy tools to ensure that financial institutions would have the liquidity, or money, they needed.

Ferguson: “Our financial system is extremely efficient at maintaining liquidity. It brings together providers of funds and borrowers of funds with very little government intervention, and often that is taken for granted. Unfortunately, on September 11 it could not be taken for granted. There were severe disruptions in market infrastructure, financial institutions, and unfortunately the people who work in them. It was a time when the Federal Reserve had to step in and provide ample liquidity. We did so using all of the mechanisms available to us at the time.”

Narrator: Typically, the incoming and outgoing payments of banks across the country balance one another. However, the events of 9-11 meant that some banks were unable to make or receive their payments. This had a domino effect that caused some banks to run huge positive balances, and others to run negative balances. They needed to find other sources of liquidity before the close of business. To help alleviate this situation, the Fed used one of its monetary policy tools, loans at the Discount Window. At the Discount Window, the Fed lends money to banks typically overnight to help them maintain smooth day-to-day operations. On a normal business day, in 2001 these loans totaled about 54 million dollars. But on

September 12, the Fed lent a record 46 billion dollars.



Narrator: But U.S. banks weren't the only concern. The Fed also wanted to make sure that foreign financial institutions would have sufficient dollars on hand to support their needs. To help achieve this, on September 12, the Fed entered into agreements with the European Central Bank and the Bank of England, and augmented an existing agreement with the Bank of Canada. These agreements, or swap lines, allow foreign central banks to exchange their currency for an equivalent amount of U.S. dollars. The European Central Bank drew on its swap line and was then able to provide dollars to banks in much of Europe. In turn, this enabled their customers, both businesses and individuals, to meet their financial obligations.

Another tool the Fed uses to control liquidity is Open Market Operations. Every day, the trading desk at the Federal Reserve Bank of New York enters the market to buy or sell Treasury securities. If the Fed buys securities, money is put into the banking system – thus increasing liquidity. Conversely, if the Fed sells securities, money is taken out of the banking system.

In the days after 9-11, the Fed wanted to increase liquidity and thus began buying securities in record amounts. On an average day in 2001, Open Market Operations injected between 2 and 8 billion dollars into the banking system.

Video Transcript

But on Wednesday, September 12, the Fed injected 38 billion dollars, more than double the previous record. On Thursday, the Fed shattered that mark with 70 billion dollars, and the day after that, the Fed injected even more – 81 billion dollars. What the Fed did, in effect, was satisfy ALL of the demand for liquidity generated by financial institutions. This calmed the markets.

Pause Here



Jamie Stewart: “The New York Fed is located two blocks from the World Trade Center, so the safety of our people was our first concern, and fortunately we were able to get through that very difficult and chaotic period without any injuries to the people that work here. Our next concern was to keep the important functions of this bank going, including a major payments operation. People stayed overnight and into the second day to keep those operations going without a single interruption, and a large number of people then moved to our backup site later in the week and we were able to continue on into the next week without any stoppage at all in the important functions of this bank.”

Narrator: On Monday, September 17, the Federal Open Market Committee – the monetary policy making body of the Fed – voted to lower the federal funds rate to increase liquidity even more. The federal funds rate is the interest rate that banks pay when they borrow money from one another. During the remainder of the year, the rate was reduced three more times to one and three-quarters percent – the lowest level in 40 years.

Ferguson: “The FOMC met on the morning of September 17. We started with a moment of silence in honor of those who had died on September 11. It then took the committee about 25 minutes to take the decisive action to cut the federal funds target rate by 50 basis points or half a percentage point.”

Narrator: And the result of the Fed’s activities? When the markets opened the following Monday, the payments system was operating smoothly, the necessary liquidity had been injected into the economy, and financial institutions were cautiously optimistic. September 17 marked the largest trading volume ever on the New York Stock Exchange in a single day – over 2 billion shares. The financial system was returning to normalcy. And “normal” for the Fed means operating 24 hours a day, 365 days a year. Of course, times of crisis, such as the days following 9-11, are no exception. The destruction of the Twin Towers created unprecedented challenges for the financial community. And, for the Fed, the events placed enormous pressure on the payments system and the financial markets.

But the Fed was prepared to meet this challenge...to address whatever needs might arise and to instill confidence in the global financial community. Even under the burden of this tragedy, the U.S. economy proved to be resilient. Money was available for those who needed it, and our financial system continued to function normally. In short, the Fed showed the benefits of a well-functioning central bank.



Glossary of Key Terms & References

Glossary of Key Terms

Automated Clearinghouse (ACH): The Fed's electronic clearing and settlement system for exchanging electronic transactions among participating banks. These transactions are usually substitutes for recurring payments, such as payroll or loan payments.

Bankers' bank: The Fed is often called the bankers' bank because it provides banks with financial services, such as check processing, electronic payments, and new currency and coin.

Bank examination: A periodic review where regulators visit a bank to check its compliance with regulations and review the safety and soundness of the bank.

Bank holding company: A corporation that owns one or more banks.

Bank regulation: Actions to make, issue, and enforce specific rules and regulations governing the structure and conduct of banking under the authority of legislation.

Bank runs: Occasions when banks' depositors would literally "run" to the bank to withdraw their money when they thought their bank might close or fail.

Bank supervision: Oversight of individual banks to ensure that they are operated prudently and in accordance with applicable statutes.

Board of Governors of the Federal Reserve System: Central, governing agency of the Federal Reserve System, located in Washington, DC, and composed of seven members, who are appointed by the President and confirmed by the U.S. Senate.

Central bank: Principal monetary authority of a nation, which performs several key functions, including issuing currency and regulating the supply of money and credit in the economy. The Federal Reserve is the central bank of the United States.

Check clearing: The movement of a check from the institution at which it was deposited back to the institution on which it was written, and the corresponding credit and debit to the accounts involved.

Currency: Any form of money in actual use as a medium of exchange, including paper currency or coins.

Depository institution: Financial institution that obtains its funds mainly through deposits from the public; this includes commercial banks, savings and loan associations, savings banks, and credit unions.

Discount rate: Interest rate at which an eligible depository institution may borrow funds, typically overnight or for a short period, directly from a Federal Reserve Bank. The law requires that the board of directors of each Reserve Bank establish the discount rate every fourteen days subject to the approval of the Board of Governors of the Federal Reserve.

Discount window: Figurative expression for Federal Reserve facility for extending credit or loans directly to eligible depository institutions.

Electronic payments: Payments completed by the transfer of funds electronically rather than by check or cash.

Glossary of Key Terms

European Central Bank (ECB): The central bank for Europe's single currency, the euro. The ECB's main task is to maintain its purchasing power and thus price stability in the euro area. The euro area comprises the 12 European Union countries that have introduced the euro since 1999.

Excess reserves: Amount of reserves held by an institution in excess of its reserve requirement and required clearing balance.

Federal Deposit Insurance Corporation (FDIC) Insurance: Deposit accounts such as checking, savings accounts, money market deposit accounts, and certificates of deposit (CDs) are insured up to \$100,000 per depositor per insured bank. FDIC insurance does not cover money invested in stocks, bonds, mutual funds, life insurance policies, annuities, or municipal securities, even if they were purchased from an insured bank. (If someone has deposits at one insured bank totaling more than \$100,000, different ownership categories of accounts are separately insured up to \$100,000.)

Federal funds rate: Interest rate charged by a bank on an overnight sale of federal funds to another bank.

Federal Open Market Committee (FOMC): Twelve-member committee made up of the seven members of the Board of Governors; the president of the Federal Reserve Bank of New York; and, on a rotating basis, the presidents of four other Reserve Banks. The FOMC meets eight times a year to set Federal Reserve guidelines regarding the purchase and sale of government securities in the open market as a means of influencing the volume of bank credit and money in the economy. The other seven Federal Reserve Bank presidents also participate at FOMC meetings but do not vote on policy decisions.

Federal Reserve Bank: One of the 12 operating arms of the Federal Reserve System, located throughout the nation, that together with their branches carry out various System functions, including operating a nationwide payments system, distributing the nation's currency and coin, supervising and regulating banks, analyzing economic conditions, and serving as banker for the U.S. Treasury.

Federal Reserve System: The central bank of the United States, created by Congress and made up of a seven-member Board of Governors in Washington, D.C., 12 regional Federal Reserve Banks, and their 25 Branches.

Fedwire: Electronic funds transfer network operated by the Federal Reserve. Fedwire is usually used to transfer large amounts of funds and U.S. government securities from one bank's account at the Federal Reserve to another bank's account.

Financial shock: Events in financial markets that impact the economy. Shocks are unexpected and unpredictable (e.g., 1987 Stock Market Crash, 1997 Asian Financial Crisis).

Float: Money that appears simultaneously in the Federal Reserve accounts of two depository institutions. These institutions include commercial banks, savings and loans, savings banks, and credit unions. When check clearing is delayed, funds in the process of collection appear in the accounts of both the institutions that receive the checks for deposit and the institutions upon which the checks are drawn or written. Thus, float inflates, for a brief time, the amount of money in the banking system.

Glossary of Key Terms

Government securities: Securities, such as bills, notes, and bonds issued by the U.S. Treasury or federal agencies.

Interest: The money a borrower pays (a lender charges) for the use of money over a period of time.

Interest rates: Rates of interest paid on deposits and other investments, determined by the interaction of the supply of and demand for funds in the money and capital markets.

Liquidity: The ability of a bank or business to meet its current obligations or the quality that makes an asset quickly and readily convertible into cash with relatively little loss of value in the conversion process.

Long-term interest rates or bond rates: Interest rates on loan contracts or debt instruments such as Treasury bonds, agency securities, municipal bonds—having maturities greater than one year. Often called capital market rates.

Member bank: Depository institution that is a member of the Federal Reserve System. All federally chartered banks are automatically members of the System; state-chartered banks may elect to join the System.

Monetary policy: A central bank's actions to influence the availability and cost of money and credit, as a means of helping to promote national economic goals. Tools of monetary policy include open market operations, discount policy, and reserve requirements.

Money: Anything that serves as a generally accepted medium of exchange, unit of measure, and store of value.

Mortgage interest rates: The interest rate charged on mortgages.

Open market operations: Purchases and sales of government and certain other securities in the open market through the Domestic Trading Desk at the Federal Reserve Bank of New York, with the purpose of influencing the volume of money and credit in the economy.

Payments system: Collective term for mechanisms (both paper-backed and electronic) for moving funds, payments, and money among banks throughout the nation. The Federal Reserve plays a major role in the nation's payments system through distribution of the currency and coin, the processing of checks, and the electronic transfer of funds.

Reserve requirements: Percentage of deposits that depository institutions must keep on reserve in their cash vaults or on deposit at a Federal Reserve Bank.

Short-term interest rates: Interest rates on loan contracts—or debt instruments such as Treasury bills, bank certificates of deposit, or commercial paper—with maturities of one year or less. Often called money market rates.

State-chartered member banks: A bank that is chartered by a state and has elected to join the Federal Reserve System.

Swap lines: Short-term exchanges of credit between central banks. For the Federal Reserve, swap lines or swap arrangements provide a way of supplying temporary dollar reserve balances to the international banking system.

U.S. Treasury securities: Interest-bearing obligations of the U.S. government issued by the U.S. Department of the Treasury as a means of borrowing money. There are three types of marketable Treasury securities—bills, notes, and bonds.

Federal Reserve References

Bram, Jason, and Andrew Haughwout, and James Orr. *"Has September 11 Affected New York City's Growth Potential."* FRBNY Economic Policy Review, November 2002, Volume 8, Number 2.

"Inspiring Confidence: The Fed's Response to 9/11." Federal Reserve Bank of Chicago Annual Report, 2001.

In Plain English. *"Why a Federal Reserve System?"* Federal Reserve Bank of Saint Louis.

Ferguson, Roger W., Vice Chairman of the Federal Reserve Board. *"September 11, the Federal Reserve, and the Financial System."* Speech delivered to Vanderbilt University, Nashville, Tennessee, February 5, 2003.

McAndrews, James J. and Simon M. Potter. *"Liquidity Effects of the Events of September 11, 2001."* FRBNY Economic Policy Review, November 2002, Volume 8, Number 2.

Neely, Christopher J. *"The Federal Reserve's Response to the September 11 Attacks."* The Federal Reserve Bank of St. Louis Regional Economist, January 2002.

Parry, Robert T. *"The U.S. Economy after September 11."* FRBSF Economic Letter, Number 2001-35, 2001.

"Responding to September 11 and Future Prospects for the New York Regional Economy." Federal Reserve Bank of New York Annual Report, 2001.

"Stability in a Crisis." Federal Reserve Bank of Philadelphia Annual Report, 2001.

"The Economic Effects of September 11." Economic Policy Review, October/December 2002, vol. 8, no. 2.

Yellen, Janet L. *"Remarks on the U.S. Economy and Monetary Policy."* Speech delivered to a Seattle Community Leaders Luncheon, Seattle, Washington, September 9, 2004.

Additional Related Articles

Baker, Gerard. "*The Fed's Extraordinary Year.*" Financial Times, 19 December 2001.

Beckett, Paul, Greg Ip, and G. Thomas Sims. "*Fed Pumps Cash To Bank System To Help Meet Spiking Demand.*" The Wall Street Journal, 13 September 2001, C1.

Cocheo, Steve. "*Disbelief and Shock at the N.Y. Fed, but all Operations Kept Working.*" ABA Banking Journal, 1 October 2001.

"*Cool Nerves at the Central Bank.*" Financial Times – FT.com, 1 October 2001.

Ip, Greg and Jim VandeHei. "*Economic Front: How Policy Makers Regrouped to Defend The Financial System – Rate Cut Caps Week Spent Trying to Lessen Harm to The Global Markets – Weighing Bailouts, Tax Cuts.*" The Wall Street Journal, 18 September 2001, A1.

Garver, Rob and Lavonne Kuykendall. "*Gov't, Industry Measures Take Shape: D.C. Acts to Open Markets, Skip Checks; Secret Meetings.*" American Banker, 14 September 2001.

"*Money Man: On September 11, as Economy Teetered, Unsung Banker Kept it From Crashing.*" Narr. Betsy Stark. ABC News, New York, 4 September 2002.

Temple-Raston, Dina. "*The Week the Fed Saved the World.*" The International Economy, November/December 2001, p.12.

"*The Fed's Fight to Stay Ahead of the Game.*" Financial Times – FT.com, 18 December 2001.

Acknowledgments

Open & Operating: The Federal Reserve Responds to September 11

Federal Reserve Bank of San Francisco

Communicating Arts
Economic Research
Public Information

Teacher Advisory Group

Gifford Asimos	Helix Charter High School, California
Francine Curtis	California State University
Barbara Doten	Robert A. Milikan High School, California
Becky Gerek	Burton High School, California
Karl Gittelman	St. Margaret's Episcopal, California
Christy Johnson	Bellingham High School, Washington
Kali Kurdy	Borah High School, Idaho
Brian LeTourneau	Olympia High School, Washington
Ron Neil	Borah High School, Idaho
David Nelson	Western Washington University
Michael Shannon	Foster High School, Washington
Brian Silva	Cabrillo High School, California
Pamela Whalley	Western Washington University

